UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/454,124	12/03/1999	JORMA ANTERO SEPPANEN	40725.830063	3390

30973 7590 01/09/2004

SCHEEF & STONE, L.L.P.
5956 SHERRY LANE
SUITE 1400
DALLAS, TX 75225

EXAMINER	
SHARMA, SUJATHA R	
ART UNIT	**PAPER NUMBER**
2684	

DATE MAILED: 01/09/2004

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/454,124	SEPPANEN, JORMA ANTERO	
	Examiner	Art Unit	
	Sujatha Sharma	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/31/03*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-13 and 15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-13,15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coverdale [US 5,809,414] (hereafter Coverdale) in view of Shah [US 6,167,259] (hereafter Shah).

Regarding claims 1,13 Coverdale discloses the method of indicating the quality of a received signal at a mobile phone comprising the steps of receiving a signal from a remote transmitter at the mobile phone; inspecting said received signal for determining quality (either RSSI or BER measurements); and providing an output correlated to the results of said inspecting step and further providing a user discernible indication in response to said output (See summary of invention, col.3, line 23-col.4, line 21).

Coverdale further teaches comparing the received signal with a predetermined threshold, and generating a first output whenever the comparing step has met said threshold and for otherwise generating a second output different from said first output (See summary of invention, col.3, line 23-col.4, line 21).

However Coverdale does not disclose that the signal quality is indicated in terms of an acceptable percentage.

In same field of endeavor, Shah discloses a wireless communication system for evaluating the quality of service in a wireless communication system by analyzing the BER percentage. See summary of invention.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Coverdale in view of Shah such that the signal quality indicated and displayed to the user is in terms of an acceptable percentage since the manner in which the signal quality is indicated lacks criticality in view of the overall function of the invention.

Regarding claims 3,15 Coverdale in view of Shah discloses all the limitations of claim 2. Coverdale further discloses use with a digital transmission and receiving system wherein the inspecting step includes the step of determining the BER/RSSI of the received signal over a sampling period (see summary of invention, col.4, lines 29-36).

3. Claims 4-7,10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coverdale [US 5,809,414] in view of Shah [US 6,167,259] and further in view of Detlef [US 6,243,568] (hereafter Detlef).

Regarding claim 4, Coverdale in view of Shah discloses all the limitations of claim 3. Coverdale does not expressly disclose a predetermined time-out period. Detlef does teach ensuring that the received signal has failed to meet the threshold value for a predetermined time-out period before generating the output indicative of such a failure. (col. 5, lines 64-67; col. 7, lines 21-38) Since Coverdale in view of Shah and Detlef both teach methods in which a receiver inspects a received signal for determining its quality, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Coverdale

and Shah according to the teachings of Detlef by ensuring that the received signal has failed to meet the threshold value for a predetermined time-out period before generating the output indicative of such a failure so that the user would not be alerted to lapses in signal quality that are only temporary.

Regarding claim 5, Coverdale in view of Shah discloses all the limitations of claim 1. Detlef further teaches the step of establishing a visual indicator for said user discernible indication (col. 5, lines 45-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to enhance the method of Coverdale and Shah by establishing a visual indication as taught by Detlef so that a user could have access to the indication simply by looking at a display.

Regarding claim 6, Coverdale discloses the method of indicating the quality of a received signal at a mobile phone comprising the steps of receiving a signal from a remote transmitter at the mobile phone; inspecting said received signal for determining quality (either RSSI or BER measurements); and providing an output correlated to the results of said inspecting step and further providing a user discernible indication in response to said output (See summary of invention, col.3, line 23-col.4, line 21).

However Coverdale does not disclose that the signal quality is indicated in terms of an acceptable percentage.

In same field of endeavor, Shah discloses a wireless communication system for evaluating the quality of service in a wireless communication system by analyzing the BER percentage. See summary of invention.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Coverdale in view of Shah such that the signal quality indicated and displayed to the user is in terms of an acceptable percentage since the manner in which the signal quality is indicated lacks criticality in view of the overall function of the invention.

Coverdale and Shah do not disclose the method of separating control signals from voice signals. Detlef teaches a method of separating the Voice and control signals that are received in a time division multiplexed format. (col. 2, lines 36 - 50; Figure 2; col. 3, lines 29 - 45; col. 4, lines 36 - 57; Figure 3, element 58).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the teachings of Detlef to Coverdale and Shah in order to evaluate the traffic channel more accurately.

Regarding claim 7, Shah further disclose the method wherein the inspecting step includes the step of quantifying the amount, in terms of the percentage acceptable, by which the voice signal fails to meet the predetermined threshold. See table 2.

Regarding claim 10, Coverdale further discloses a user discernible audio signal indicating the voice signal quality (see summary of invention).

Regarding claim 11, Coverdale further discloses a variation in the audio signal indicating the voice signal quality as the voice signal quality departs from the predetermined threshold (see col 4., lines 1-10).

Regarding claim 12, Coverdale in view of Shah discloses all the limitations of claim 6. Coverdale does not expressly disclose a predetermined time-out period.

Detlef does teach ensuring that the received signal has failed to meet the threshold value for a predetermined time-out period before generating the output indicative of such a failure. (col. 5, lines 64-67; col. 7, lines 21-38) Since Coverdale in view of Shah and Detlef both teach methods in which a receiver inspects a received signal for determining its quality, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Coverdale and Shah according to the teachings of Detlef by ensuring that the received signal has failed to meet the threshold value for a predetermined time-out period before generating the output indicative of such a failure so that the user would not be alerted to lapses in signal quality that are only temporary.

4. Claims 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coverdale [US 5,809,414] in view of Shah [US 6,167,259] and further in view of Champness [GB 2 275 848].

Regarding claim 5, Coverdale in view of Shah discloses all the limitations of claim 1. However they do not disclose a method of providing a visual indication of the signal quality. Champness teaches the step of establishing a visual indicator for said user discernible indication (See Fig. 7A). It would have been obvious to one of ordinary skill in the art at the time the invention was made to enhance the method of Coverdale and Shah by establishing a visual indication as taught by Champness so that a user could have access to the indication simply by looking at a display.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coverdale and Shah in view of Detlef as applied to claim 6 above, and further in view of Besharat et al. (hereafter Besharat), U.S. Patent No. 6,219,540.

Regarding claim 8, Coverdale in view of Shah and in view of Detlef discloses all the limitations of claim 6. Besharat further teaches that said user discernible step includes the step of causing a visible display to pulsate in the form of blinking (col. 4, lines 49 - 57), which is not disclosed by Coverdale. It would have been obvious to one of ordinary skill in the art at the time the invention was made to further enhance the method of Coverdale and Shah in view of Detlef by providing a pulsating visible display as taught by Besharat so that the blinking of the display might draw the user's attention to the display, or so that a different message or indication could alternately be displayed.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coverdale and Shah in view of Detlef and further in view of Besharat as applied to claim 8 above, and further in view of U. S. Patent No. 5,802,039 to Obayashi et al.

Regarding claim 9, Coverdale in view of Shah in view of Detlef and in view of Besharat does not teach that the pulsation is correlated to the amount the received voice signal departs from the predetermined threshold level. Obayashi discloses a mobile radio communication apparatus, in which the BER of a received signal is measured and displayed (col. 4, lines 51 - 60). If the BER reaches a certain threshold, the display blinks. Also, the speed of the blinking is changed in accordance with the value of the BER (col. 13, lines 32 - 35, 59 - 62). Since Coverdale, in view of Shah, Detlef and Obayashi all teach measurement of signal quality by a mobile communication device, and the pulsating of a visible display which gives an indication that signal quality has fallen below a threshold, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Coverdale in view of Shah in view of Detlef and in view of Besharat such that the speed of the blinking of the display

would correlate with the amount that the received signal departs from the predetermined threshold, as taught by Obayashi, so that the user could clearly notice the state of the received voice signal by glancing at the display.

Response to Arguments

Applicant's arguments filed 10/31/03 have been fully considered but they are not persuasive.

Applicant has cancelled claims 2 and 14 and included the limitations of the cancelled claims in claims 1 and 13. These limitations were already addressed in the previous office action mailed 7/16/03 (see paper # 14).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, Coverdale discloses a method of comparing the received signal with a predetermined threshold, and generating a first output whenever the comparing step has met said threshold and for otherwise generating a second output different from said first output (See summary of invention, col.3, line 23-col.4, line 21). In same field of endeavor, Shah teaches a wireless communication system for evaluating the quality of service in a wireless communication system by analyzing the BER percentage (see summary of invention) and it is this teaching of Shah, which is combined with Coverdale to meet the limitations as claimed.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Coverdale in view of Shah such that the signal quality indicated and displayed to the user is in terms of an acceptable percentage since the manner in which the signal quality is indicated lacks criticality in view of the overall function of the invention.

Therefore the rejections of claims 1, 3-13, and 15 as discussed above are considered proper.

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sujatha Sharma whose telephone number is 703-305-5298. The examiner can normally be reached on Mon- Fri 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Sujatha Sharma
January 7, 2004

NAY MAUNG
SUPERVISORY PATENT EXAMINER